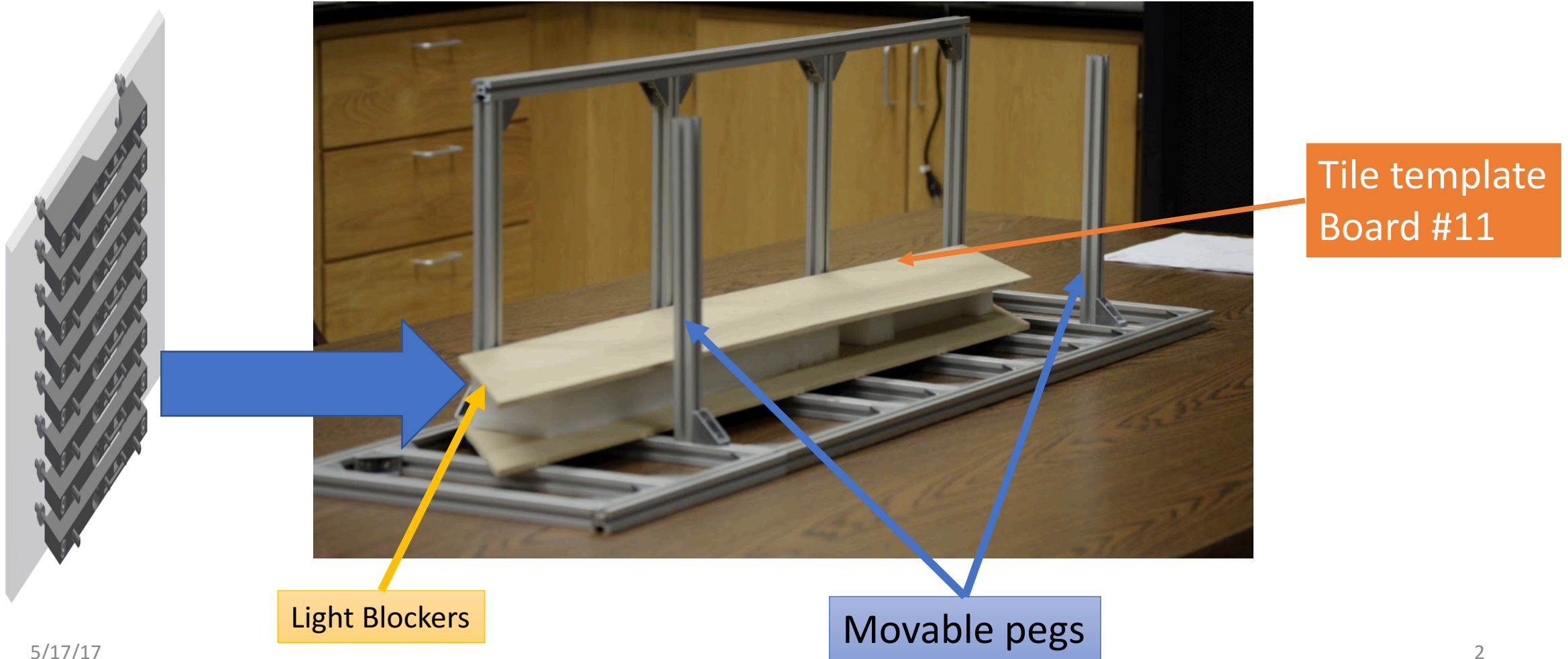# HCal Tile Test Stand Update
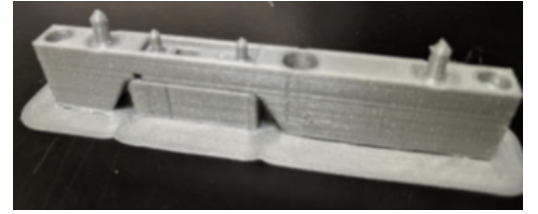
May 17, 2017
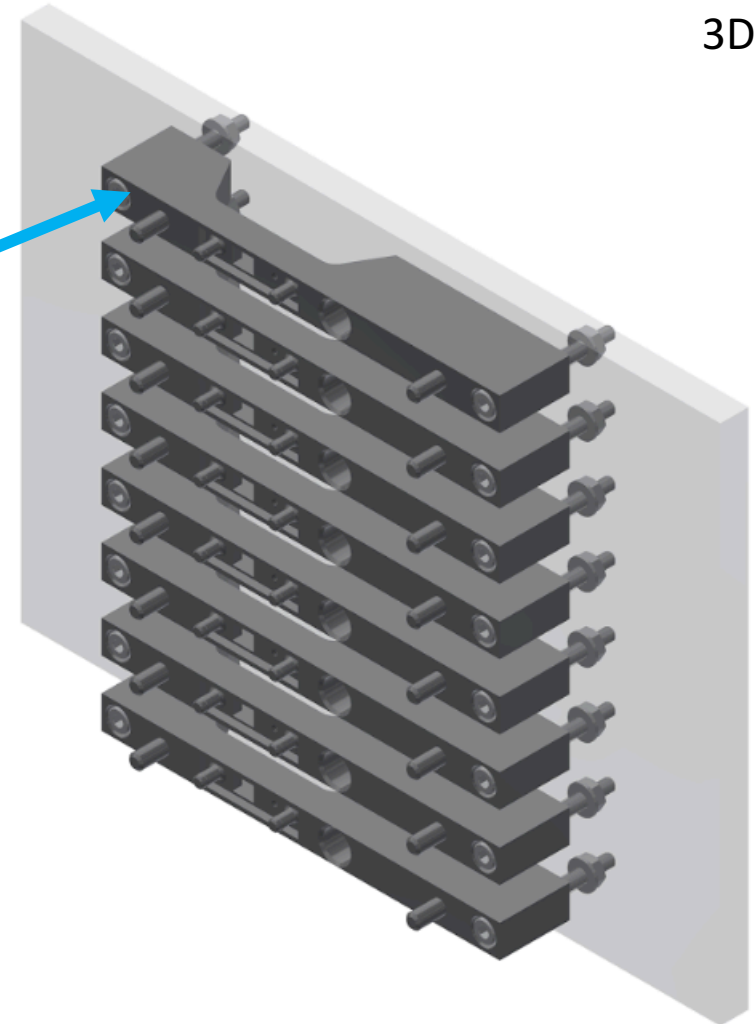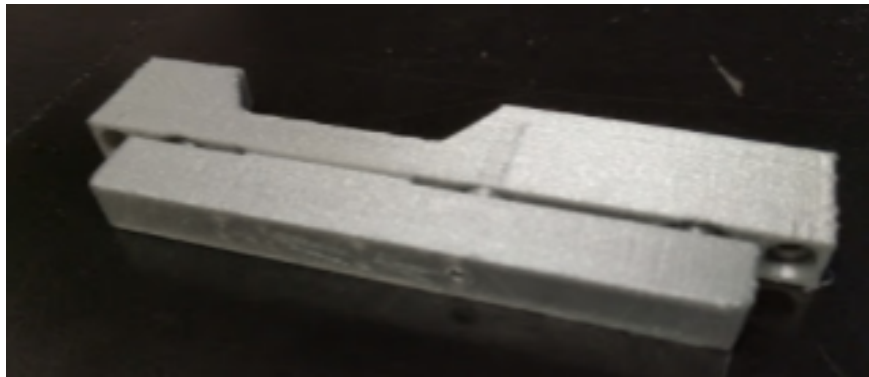
Test Stand – One Size Fits All

Tile template Board #11

Light Blockers

Movable pegs
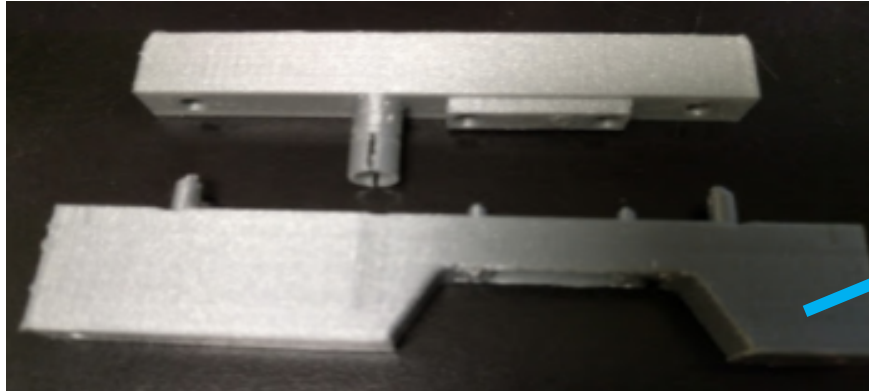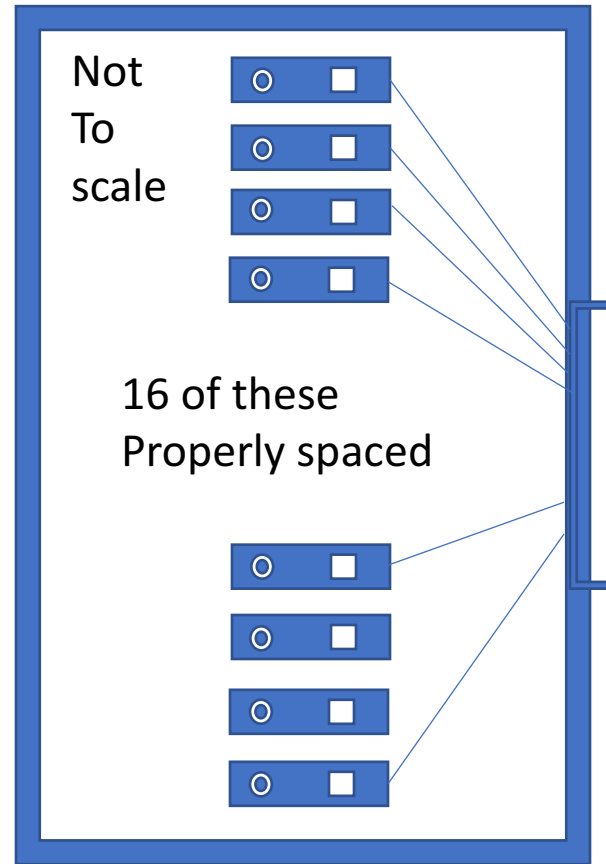
SiPM Holder Plate

3D printed

Proposed Plan for Mounting the SiPM Holder on the Test Stand

- GSU will design the mounting plate with 16 of SiPM holders. The wires can be soldered to a connector on the side of the plate. This will avoid connecting individual wires.
- The spacing between the SiPM holders on the plate will be determined based on the thickness of the spacing sheets inserted between the stack of Hcal tiles.
- For the test stand, we need to increase the length of the SiPM holder in order to make screw holes to be used for attaching them to the plate.
- We may also want to redesign the holder to make room for the LED.

SiPM Holder Mouting Plate

CAEN 5702

Not To scale

16 of these Properly spaced

Note from Megan – Part One

Points for discussion:

- Do we want Uniplast to do LED tests with the tester electronics setup?

- Does Uniplast already do an LED test (I thought so)? If so would the tile tester replace this test too or is that at an earlier stage of production?

- The rates discussed in Edward's email, does he assume self triggering or coincidence trigger?

- If you talk to Richie, maybe you could talk to him about the pins we were looking at for sliding the holders into place.

- We need spaces to allow space for electronics unless we have wires but we worry about noise.

Notes from Megan – Part Two

Items for GSU:

- Tile mapper electronics including preamp boards and readout board

- The above readout board may require another piece (I think this is why Haggerty became unsure if it was worth sending all of this to us?)

- CAEN module

- Soft/Firmwar for the above CAEN module that will allow for more readout options

- 16 tiles with SiPMs to test multiple readouts with the CAEN etc

- Do they have the wires etc they plan to use from the SiPMs? The holder suggests they are smaller than the versions we have from the 2016 prototype.

A Few Questions Need Answers

- How many stands should we built?

- What exactly do we need to send to UNIPLUS?

- How much noise will we get if longer wires are used to connect SiPMs to the CAEN module?